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THE LISTENER'S CHOICE: A STUDY ON PREFERRED CONTEMPORARY TECHNOLOGIES IN THE ASSAMESE MUSIC INDUSTRY

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ABSTRACT

The onset of digitalisation and related technologies has made music more available and heard in the history of mankind. This article, therefore, attempted to find out the various preferred contemporary technologies and media currently used in the Assamese music industry for listening to and watching music audio/videos. The methodology included personal interviews with some prominent artists and a survey of 500 music listeners with a schedule within Assam in North-East India. The findings indicated that mobile phones/tablets and YouTube are the two most highly preferred contemporary technologies and media among the respondent listeners. This study also identified certain categories of music listeners who should be emphasised by stakeholders of the above music industry. This is essential to increase the usage of specific contemporary technologies and media for listening/viewing music audio/videos. These observations are expected to provide stakeholders (music marketers) with a brief idea about the dynamics of the above industry.

KEYWORDS: *Digitalisation, Contemporary Technologies, Contemporary Media, YouTube, Online Music Apps*

1. INTRODUCTION

Without engagement, music has no meaning. Over the years, people engaged with music in different ways (Greasley & Lamont, 2006). Due to the evolution of numerous technologies and media in the field of music business, listeners' way of engaging and enjoying music has changed over the years (Greasley & Lamont, 2011; Bonneville-Roussy, Rentfrow, Xu & Potter, 2013). The way people engage in music varies across their demographics (Fancourt, Garnett & Müllensiefen, 2020). In fact, people's engagement with music varies with age. The young generation prefers music listening more, which declines in middle age and again becomes more important in later age (Bonneville-Roussy et al., 2013). Music as an industry started with the innovation of the first phonogram record when people started listening to music by paying money (Meler & Skoro, 2013). Mass distribution of music started with the printing of music as sheet music (Dzyuba, 2021). The music industry broadly includes businesses such as recording sound, publishing music, television stations and radio, music schools and musical workshops, various musical associations, and associations for copyright protection and other related rights (Bernardo & Martins, 2013; Bernardo & Martins, 2014; Meler & Skoro, 2013).

There is a strong relationship between people, music, media, and technologies (Hirai, Yoshioka & Nishikiori, 2020). New developments in technologies and devices resulted in the availability of music on mobile phones, automobiles, CD players, computers, iPods, digital formats, etc., which has led to the mass availability of music in the 21st century (Meler & Skoro, 2013). Due to advances in technologies and different media, people have attained considerable control over the music they listen to (North, Hargreaves & Hargreaves, 2004).

2. NEED OF THE STUDY

It can be stated that Assamese music as an industry started in 1924 when Profulla Chandra Baruah recorded the first Assamese modern song, "Phoolu Phoolile Junaye Hahile," in HMV (His Masters Voice) Company (Dowerah, 2007-08) in Calcutta (now Kolkata). Music labels like Megaphone Records Label of Calcutta, Columbia Records, HMV Calcutta, etc., were some of the prominent distribution houses in India in those days. Also, artists from Assam had to visit Kolkata to make Long-Playing (LP) records prior to 1983 (L. Goswami, personal communication, November 26, 2019). The role of radio was also significant in popularising modern Assamese songs. Dharmani and Chakravarti (1993) mentioned that radio as a mass media took music to the homes of the masses in Assam. It is to be noted that the introduction of commercial radio broadcasting in the early 1920s, the evolution of music like rock & roll in the 1950s, and the adoption of portable formats like LP records, audio cassettes, and CDs, together with the development of distribution chains and record labels, became major drivers of the music industry (Bernardo & Martins, 2013; Tschmuck, 2003; Fouce, 2010). However, from 1982-83 onwards, the LP records market declined, and the popularity of cassettes increased (L. Goswami, personal communication, November 26, 2019). Loknath Goswami mentioned that Roy Cycle Mart

of the Tinisukia district of Assam was a pioneer of the cassette industry in Assam. Roy Cycle Mart financed albums and marketed the same through distribution. With a well-organised distribution network, cassettes were made available in cartons through overnight services in some strategic points all over Assam. The towns of Jagiroad and Jakhalabandha in Assam were some strategic points for marketing physical forms of music like Long-Playing (LP) Records, Spool Cassettes, and even CDs and DVDs (Papon, personal communication, November 26, 2019). Sales executives were sent to rural areas mainly to sell music albums (Krisnamoni Nath, personal communication, October 28, 2019). Digitalisation and technological upgradation through availability on online websites and free streaming apps have brought changes in the preference of listening media and listening habits of music listeners over the years (Mizell, Crawford & Anderson, 2003). In this manner, the Assamese music industry, like the global music industry, has witnessed different phases. Many businesses grew, and people earned their livelihood through association with this industry. Similarly, the way music is purchased or collected has also changed by a great deal, creating challenges for music producers and marketers for reaching listeners. Like all other sectors, online marketing is the way forward for many industries for better market penetration into rural markets also (Mittal & Mohan, 2016; Mukhopadhyay & Mandal, 2020). Hence, online music marketing is to be emphasised as it not only provides new marketing platforms but also helps marketers with new avenues of digital payment methods, especially for streaming platforms to improve music listening tendencies among listeners (Saxena, Dhall & Malik, 2021). Preferences for contemporary technologies for listening to music will lead to higher repurchase intention (Vyas, Patel & Bhatt, 2009). The latter depends on listeners' satisfaction, involvement, post-benefit convenience, accessibility convenience, transaction convenience, and time convenience (Vyas et al., 2009). Appropriate emphasis on these issues and consequent formulation of needed strategies are essential on the part of the stakeholders of the music industry, particularly in the case of Assam, to expand their reach concerning their target customers (music listeners). This would, especially, foster consistent profitability and survivability of the aforementioned stakeholders of the aforementioned industry, thereby maintaining and generating employment opportunities in this industry. This will be a boon for the economy of Assam in particular and of India in general.

Gap Analysis: Based on the above discussion, it is seen that there is a dearth of studies regarding preferred contemporary technologies and media currently used to listen to and view songs and music videos in the case of the Assamese music industry. In this context, there has also been a noticeable lack of appropriate marketing strategies for various songs and music videos in this industry, rendering it comparatively less competitive concerning other such industries in India and the entire world in general. This study, therefore, has attempted to fill this significant gap. It can be expected that the findings of this study will immensely benefit the stakeholders of this industry by gaining greater knowledge about the music listeners' preferences about the aforementioned issues with additional advantages as mentioned earlier.

3. REVIEW OF LITERATURE

The global music industry was at its peak in and around 1990 with the emergence of satellite, cable, and digital technologies (Bridge, 2019). Vinyl (Long Playing Records) played on turntables/record players/phonographs and Spool Cassettes played on cassette decks/tape players/tape recorders were the primary music listening devices before digitalisation (Brovig & Danielsen, 2016; Osborne, 2018; Rashidi, 2019). The changes occurred with the evolution of digital technology. With the evolution of music-related media and technologies over the years, finally, the digital age has arrived (Rahman & Shaharim, 2022; Tobias, 2016). Various digital music-related technologies, such as audio-compression technologies and applications (MP3 players in 1998), peer-to-peer (P2P) file-sharing networks like Napster (in 1999), and online music stores (in 2000), were introduced, and they revolutionised the industry (Bhattacharjee, Gopal, Lertwachara, Marsden, & Telang, 2007). Along with mainstream sectors, various ancillary sectors of the music industry, like publishing, recording, and live music industries, and other stakeholders of this industry are also affected by digitalisation (Vazquez, 2017). Digitalisation has changed the process of making and distributing music and thereby listeners' consumption habits (Avdeef, 2012).

Back in 2012, computers, iPods, radios, CD players, MP3 players, phones, Walkmans or Discmans were the major playback technologies in the case of music listening, and similarly, listening to the radio, listening to music on CD players and computers, and creating music playlists on computers were the ways listeners participated in music (Avdeef, 2012). Finding new music on internet sites like Myspace or LastFM, using mobile phones to listen to music, downloading single tracks, and using iPods were the other habits among the listeners (Avdeef, 2012). Interestingly, listeners were used to listening to a wider number of genres and sub-genres in iPod/ Mp3 players during those days (Avdeef, 2012; Roessner, 2016). At the same time, desktop and laptop computers were highly used music listening devices (Spinelli, 2015). Spinelli (2015) stated that YouTube, Spotify, Sound Cloud, Pandora, iTunes, and Beat Music were the most popular streaming services for listening to music. The same scholar also mentioned Archive, Google Play Music, Bandcamp, Grooveshark, Songza, and Last.fm as other streaming services for listening to music. This was in addition to listening to music by attending live concerts and downloading music from websites. Spinelli (2015) has also stated that college students prefer to purchase music online over other forms of purchasing.

Younger music listeners mostly prefer contemporary technologies for listening to music (Krause, North & Hewitt, 2015). Also, recorded music is played in public, and listening/ watching music on television gives comparatively less choice than listening to music from cloud-based sources, MP3 players, or one's computer (Krause et al., 2015). Prensky (2001) classified such listeners into "digital natives" and "digital immigrants." The digital native listeners include those who were born during the age of computers, the internet, and video games. On the other hand, digital immigrants are traditionally inclined to their own culture (Prensky, 2001; Schaefer, 2016).

For listening and learning music, there are two forms of media and technology, namely, indigenous (traditional) and contemporary technology/media (Akuno, 2018). The latter are modern electronic media and technology available on social platforms and mass communication media. Music listening is nowadays characterised by trans-media use as they use different technologies for accessing, storing, sharing, and listening to their music (Lepa & Seifert, 2016). Among the younger birth cohorts, 'Digital Mobilists' and 'Versatile Audiophiles' are the two homogeneous large music-related media user groups (Lepa & Seifert, 2016). 'Digital Mobilists' represent those narrowly classified 'audio repertoires' that mainly focus on radio, notebooks, mobile devices, internal speakers, and headphones. Contrariwise 'audio repertoires' of 'Versatile Audiophiles' are broader and include HiFi headphones, HiFi stereo units, various storage media, and various types of separate loudspeakers (Lepa & Seifert, 2016).

Over the years, the role of YouTube in music learning and practice has been immense (Akuno, 2018). The music industry is largely affected by the video-sharing platform YouTube, as it gives access to a large collection of songs and music videos uploaded by both artists and users (Wlömert, Papies, Clement & Spann 2024). Digital youths use YouTube as a primary source of musical engagement after mobile phones and iPods (Avdeef, 2012). With social media, now people have many alternatives for discovering new artists, sharing recommendations, and listening to music (Dewan & Ramaprasad, 2014). Hence, these popular internet-based music sources like YouTube, as well as online streaming services such as Spotify, Apple Music, Jio Music, Amazon Prime Music, and others, have drawn students away from traditional sources to contemporary sources of music (Czeisel & Smith, 2021). Along with discovery, the sharing of content also goes hand in hand, and individual listeners share their recommendations along with actual music, thereby helping others get sample music as such. Social media, individual blogs, sites like Last.fm, Pandora, Mog, Hyde Machine, and video streaming sites like YouTube make it possible (Dewan & Ramaprasad, 2014).

Listeners nowadays face countless choices of music platforms based on business models (advertising-supported, fee-based, etc.), delivery mode (streaming, downloading, etc.), and others with vivid characteristics (Weijters, Goedertier, & Verstreken, 2014). Weijters et al. (2014), with an in-depth interview of 92 respondents and an online conjoint survey of 764 respondents, studied the musical source preferences between "free illegal" sources and "legal ethical" sources of music listening. Youngsters and young adults are more inclined to advertisement-supported platforms, and middle-aged adults prefer advertisement-free platforms (Weijters et al., 2014). Many contemporary social media platforms like TikTok have suddenly become strong marketing tools and make the song viral overnight (Winkler, 2024). Various social networking platforms like YouTube, UStream, Twitter, Facebook, and Music Blogs are the other strong interactive marketing platforms for music where fans can interact with their favourite artist (Dugan, 2011; Guo, 2023). Sharing music videos, concert footage, music documentaries, artist/band interview materials, and free EP, mixtape, album, and Mp3 downloads are effective social media marketing tactics on these platforms (Dugan, 2011). The entire production, consumption, and distribution of music have changed, and the power has shifted in the hands of artists and fans. The artist distributes their music directly to the public with total control of all the ownership, rights, creative process, pricing, release dates, and more (Sen, 2010).

Ogden, Ogden, and Long (2011) emphasised the current condition of the music industry and the changes that occurred due to technological advances over the years. Borthakur and Kalita (2018) have given a brief history of the evolution of modern music in Guwahati city of Assam in North East India. Goswami (2016), in his book "Asomiya Adhunik Sangitor Itihas," has elaborately discussed the history of the Assamese music industry. The above are some of the prominent research works in the field of consumer preferences for musical platforms.

4. OBJECTIVES OF THE STUDY

This study aims to find out the various preferred contemporary technologies and media currently used to listen to and view songs and music videos and listeners' preference for the same. This was attained through the identification of specific group(s) of respondent listeners (based on the above demographic variables (like occupation, annual income level, life cycle stage, education level, gender, and marital status) with respect to their preference levels of contemporary technologies and media used to listen and view songs and music videos respectively (CTMLVSV). For this purpose, the following hypothesis (H) was formulated.

H: There are significant differences among the means of respondent music listeners' preference levels of CTMLVSV across various groups based on the above-mentioned demographic variables.

For testing the above hypothesis (H), the following null and alternate hypotheses (denoted by H0 and H1, respectively) have been formulated.

H0: There are no significant differences among the means of respondent music listeners' preference levels of CTMLVSV across various groups based on the above-mentioned demographic variables.

H1: There are significant differences among the means of respondent music listeners' preference levels of CTMLVSV across various groups based on the above-mentioned demographic variables.

5. MATERIALS AND METHODS

Research Design: This study involves exploratory and descriptive research design. Music marketing is a novel concept and as limited research work has been conducted, the research questions and hypothesis were explored with a preliminary exploratory study followed by descriptive research involving analytical research. Respondents (as explained below) were interviewed to generate new ideas and research questions.

Sources of data, data collection methods, and sampling plan: The necessary data was collected initially from secondary data sources. These comprised relevant books, journals, websites, etc. Next, required data was collected from primary sources, which included various noted singers and music teachers of Assam through personal interviews. Through this process, various contemporary technologies and media used to listen to songs and watch music videos were identified after due verification. Thereafter, a structured schedule was developed to obtain the required data for this study from the study sample comprising 500 respondent listeners/viewers of songs and music videos. The aforesaid sample was selected from the study population with the help of the convenience sampling technique. This study was carried out within Assam from May 2022 to November 2023.

Respondent listeners' perception regarding their levels of preference for contemporary technologies and media used to listen and view songs and music videos respectively (CTMLVSV) was measured using a 6-point scale, i.e., "high preference," "above average preference," "average preference," "below average preference," "least preference," and "no preference." These levels were represented by weights 5, 4, 3, 2, 1, and 0, respectively. Preferences for each CTMLVSV were measured with the help of Weighted Arithmetic Mean (WAM) using the following formula. WAM = {(5×NHP) + (4×NAAP) + (3×NAP) + (2×NBAP) + (1×NLP) + (0×NNP)} ÷ (5+4+3+2+1+0).

Where NHP, NAAP, NAP, NBAP, NLP, and NNP indicate the number of respondents who experienced "high preference," "above average preference," "average preference," "below average preference," "least preference," and "no preference" respectively, for the above-mentioned CTMLVSV.

The demographic characteristics of the above respondents were based on their age group, occupation, annual income level, life cycle stage, gender, marital status, and educational qualification.

Statistical Method Used for Analysis: To fulfil the above-mentioned objectives, it was necessary to find out the specific group(s) of respondent listeners (based on the above demographic characteristics) with respect to the previously mentioned preference levels of CTMLVSV. The study will help to identify groups of listeners that will require due emphasis by the stakeholders of the Assamese music industry with appropriately devised marketing strategies for increasing usage of various contemporary technologies and media for listening/viewing songs and music videos. This was attempted to be accomplished using One-Way Analysis of Variance (ANOVA) and Independent Sample t-test at a significance level (α) of 5% (0.05). For this purpose, aforesaid music listeners' preference levels of CTMLVSV were taken as the dependent variables, and their above demographic characteristics were treated as the independent variables. One-way ANOVA was employed to examine whether the means of the above dependent variable was significantly different across various groups of the above independent variable (Aaker, Kumar, Leone & Day, 2016; Cooper, Schindler & Sharma, 2019; Malhotra & Dash, 2019). Firstly, ANOVA was used to find out the means of the various CTMLVSV, which differed significantly concerning different groups of respondents' age group (i.e., independent variable) (p-value less than α=0.05 (5%)). Next, the comparatively largest mean and the corresponding age group (of respondents) were identified. This group of respondent listeners requires more consideration from the stakeholders of the Assamese music industry. Likewise, One-Way ANOVA was used to identify the specific group of respondents who need higher focus from the stakeholders of the above industry with respect to their occupation, annual income level, life cycle stage, and education level. Similarly, an Independent Sample t-test was used to find respondents based on their gender who required emphasis on the part of various stakeholders of the above industry (Aaker et al., 2016; Cooper et al., 2019; Malhotra & Dash, 2019). As such, their gender was taken as the independent variable, and their preference levels of CTMLVSV were taken as the dependent (test) variables. Here again, firstly, a t-test was used to find out CTMLVSV in the case of which the aforementioned means differed significantly with respect to different groups of respondents' gender (i.e., independent variable) (p-value less than α=0.05 (5%)). Then, from descriptive statistics, it was tried to find out the value of the above mean (relating to the above-identified CTMLVSV), which was higher in comparison to the other mean and the corresponding group concerning respondents' gender. The latter identified group (based on the respondent's gender) requires higher consideration from various stakeholders of the Assamese music industry. Similarly, an Independent Sample t-test was used to find out the specific group of respondents based on marital status who need higher attention from stakeholders of the above industry.

6. RESULTS AND DISCUSSIONS

6.1 Demographic Profile of Respondents: The findings of this study show that an almost equal number of male and female respondents are surveyed, and the number of *males* (50.60%) is marginally high. Most of them belonged to the age group of *18-28 years of age* (61.40%) (refer to Table 1). It is also noticed that most of the respondents of this study are *unmarried* (72.60%), *are young adults* (69%), and are *students* (43%). Therefore, most of the respondents belong to the "*no income*" group (44.40%). Also, most of them are *graduates* (47.20%) and are from *urban areas* (62.20%).

Gender	F	%		Marital Status	F	%
Male	***253***	***50.60***		Married	137	27.40
Female	247	49.40		***Single***	363	72.60
Total	**500**	**100.00**		**Total**	**500**	**100.00**
Age (in years)	**F**	**%**		**Annual Income (Rs. (INR))**	**F**	**%**

Below 18 years	20	4.00		***No Income***	***222***	***44.40***
18 to 28 years	***307***	***61.40***		Less than 3 Lakh	73	14.60
29 to 38 years	86	17.20		3 - 5 Lakh	93	18.60
39 to 48 years	42	8.40		More than 5 Lakh - 7 Lakh	60	12.00
49 to 58 years	31	6.20		More than 7 Lakh - 10 Lakh	27	5.40
59 and Above years	14	2.80		Above 10 Lakh	25	5.00
Total	**500**	**100.00**		**Total**	**500**	**100.00**
Occupation	**F**	**%**		**Life cycle stage**	**F**	**%**
Student	***215***	***43.00***		Teenagers	28	5.60
Housewife	32	6.40		***Young Adults***	***345***	***69.00***
Employed-Govt.	88	17.60		Young married without a child	25	5.00
Employed-Private	94	18.80		Young married with children	51	10.20
Self Employed Business	32	6.40		Older married with children above 18 years of age	35	7.00
Self Employed-Professional	32	6.40		Retired older	8	1.60
Retired	7	1.40		Others	8	1.60
Total	**500**	**100.00**		**Total**	**500**	**100.00**
Educational Qualification	**F**	**%**		**Area of residence**	**F**	**%**
Below 10th Standard	16	3.20		***Urban Area***	***311***	***62.20***
Passed 10th Standard	6	1.20		Sub-Urban Area	116	23.20
Passed 12th Standard	19	3.80		Rural Area	73	14.60
Graduate	***236***	***47.20***		**Total**	**500**	**100.00**
Post Graduate	223	44.60				
Total	**500**	**100.00**				

Table 1: Demographic Profile of the Respondents

6.2 Preferences of Respondents in Music Listening: People in Assam enjoy music. This is evident from the fact that most respondents (62.40%) experience "*high enjoyment*" while listening to music (refer to Table 2). Almost half of them (49.20%) listen to music between 1 hour to 3 hours a day. Also, most of them (66.20%) prefer both audio and video formats of music. Besides, most of them (81.80%) prefer both filmy and non-filmy music.

Level of Enjoyment while Listening to Music	**F**	**%**		**Preferred Form of Music**	**F**	**%**
High Enjoyment	***312***	***62.40***		Music Audios	145	29.00
Above Average Enjoyment	128	25.60		Music Videos	24	4.80
Average Enjoyment	53	10.60		***Both***	***331***	***66.20***
Below Average Enjoyment	3	0.60		**Total**	**500**	**100.00**
Least Enjoyment	4	0.80		**Preferred Segment of Music**	**F**	**%**
Total	**500**	**100.00**		Filmy Music	37	7.40
Time of Listening Music	**F**	**%**		Non-Filmy Music	51	10.20
Less than 1 hour a day	181	36.20		***Both***	***409***	***81.80***
More than 1 hour to 3 hours a day	***246***	***49.20***		Others	3	0.60
More than 3 hours to 5 hours a day	54	10.80		Total	500	100.00
More than 5 hours a day	19	3.85				
Total	**500**	**100.00**				

Table 2: Respondents' Preferences While Listening to Music

6.3 **Preferred Contemporary Technologies and Media for Listening/Viewing Songs and Music Videos (CTMLVSV):** Eight different contemporary technologies and media for listening/viewing songs and music videos (CTMLVSV) have been identified as shown in Table 3. Of these, listening and watching songs/videos on YouTube, mobile phones/tablets, and online music/radio apps are the three most highly preferred by most of the respondents with 5.66, 5.63, and 5.18 mean scores respectively.

Sr. No.	Contemporary Technologies and Media for Listening /viewing songs/ music videos	High Preference		Above Preference		Average Preference		Below Average Preference		Least Preference		Cannot say as never used the same		Mean Score
		F	%	F	%	F	%	F	%	F	%	F	%	
1	iPods	64	12.80	93	18.60	**101**	**20.20**	57	11.40	67	13.40	**118**	**23.60**	**3.35**
2	PCs/laptops	179	35.80	159	31.80	89	17.80	44	8.80	15	3.00	14	2.80	**4.80**
3	**Mobile Phones/Tablets**	**380**	**76.00**	84	16.80	26	5.20	6	1.20	3	0.60	1	0.20	**5.66**
4	**Websites like YouTube etc.**	**378**	**75.60**	79	15.80	30	6.00	10	2.00	1	0.20	2	0.40	**5.63**
5	**Online music/radio apps**	**279**	**55.80**	105	21.00	77	15.40	17	3.40	10	2.00	12	2.40	**5.18**
6	Offline music/radio apps	124	24.80	**137**	**27.40**	108	21.60	52	10.40	37	7.40	42	8.40	**4.27**
7	Social networking apps (like WhatsApp etc.)	98	19.60	121	24.20	**124**	**24.80**	87	17.40	43	8.60	27	5.40	**4.12**
8	Social networking sites (like Facebook)	96	19.20	**135**	**27.00**	94	18.80	77	15.40	51	10.20	47	9.40	**4.01**

Table 3: Preference Levels for Different Types of CTMLVSV

6.4 Listeners' Demographics and Preferred CTMLVSV:

6.4.1. Age group and preferred CTMLVSV: One-way ANOVA results led to the rejection of the null hypothesis stating that the means of respondent music listeners' current preference for listening/viewing songs/music videos via all the contemporary media under study do not significantly vary across age group. This is evident from the p-value of all the CTMLVSV which are less than α=0.05. This means that there are significant differences among the above means with respect to their age group (refer to Table 4). From descriptive statistics, it is observed that the above mean is highest in the case of those listeners who belong to the age group of 18-28 years of age in case of iPods, PCs/Laptops, Mobile Phones/Tablets, websites like YouTube and offline music/radio apps. It means listeners belonging to this age group of 18-28 years prefer to listen/view songs/music videos more on the respective media compared to other age groups. Therefore, stakeholders of the Assamese music industry should specifically focus on this age group to increase the usage of the same contemporary media or they can promote their musical content with those media. In the case of preferences of listening/viewing songs/music videos on websites like YouTube stakeholders can also focus on 29-38 years of age group with similar mean value. Similarly, it has been noticed that in the case of users of online radio/music apps, respondents belonging to below 18 years of age have the highest mean value. In the case of users of social networking apps (like WhatsApp) and social networking sites (like Facebook) respondents belonging to the 39-48 years of age group have the highest mean value. So, needs special attention from the stakeholders.

Sr. No.	Contemporary Technologies and Media for Listening / viewing songs/ music videos	Age (in years)												p-value	Status of H_0
		Below 18		18-28		29-38		39-48		49-58		59 and above			
		N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean		
1	iPods	20	1.80	**307**	**2.73**	86	2.33	42	1.88	31	0.35	14	0.79	0.000	rejected
2	PCs/laptops	20	3.05	**307**	**4.08**	86	3.70	42	3.38	31	2.90	14	2.57	0.000	rejected
3	Mobiles Phones/Tablets	20	4.70	**307**	**4.74**	86	4.67	42	4.33	31	4.42	14	4.29	0.001	rejected
4	Websites like YouTube etc.	20	4.55	**307**	**4.69**	**86**	**4.69**	42	4.60	31	4.23	14	4.21	0.007	rejected
5	Online music/radio apps	**20**	**4.50**	307	4.40	86	3.94	42	4.21	31	2.90	14	3.00	0.000	rejected
6	Offline music/radio apps	20	2.75	**307**	**3.61**	86	3.35	42	2.86	31	1.42	14	1.21	0.000	rejected
7	Social networking apps (like WhatsApp)	20	2.50	307	3.23	86	3.07	**42**	**3.43**	31	2.65	14	2.29	0.007	rejected
8	Social networking sites (like Facebook)	20	2.50	307	3.16	86	3.05	**42**	**3.33**	31	1.97	14	1.71	0.000	rejected

Table 4: ANOVA- Age and preferred CTMLVSV

6.4.2 Occupation and preferred CTMLVSV: As explained in sub-section 6.4.1, it is found that stakeholders of the music industry should especially focus on listeners who are *employed in private sectors* in the case of iPods, PCs/Laptops, offline music/radio apps, and social networking sites like Facebook (refer to Table 5). Similar emphasis should be accorded to students in the case of mobile phones/tablets, housewives in the case of websites like YouTube, and *self-employed professionals* in the case of online radio/music apps.

Sr. No.	Listening and viewing songs and music videos	Occupation														p-value	Status of H_0
		Student		Housewife		Employed in Public Sector		Employed in Private Sector		Self Employed Business		Self Employed Professio-nal		Retired			
		N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean		
1	iPods	215	2.60	32	2.22	88	1.78	**94**	**2.64**	32	2.19	32	2.19	7	0.00	0.000	rejected
2	PCs/laptops	215	3.97	32	3.56	88	3.55	**94**	**4.03**	32	3.50	32	3.59	7	2.29	0.000	rejected
3	Mobile Phones/Tablets	**215**	**4.73**	32	4.41	88	4.70	94	4.67	32	4.53	32	4.53	7	4.00	0.024	rejected
4	Websites like YouTube etc.	215	4.66	**32**	**4.84**	88	4.74	94	4.62	32	4.44	32	4.41	7	3.71	0.003	rejected
5	Online music/radio apps	215	4.36	32	3.97	88	3.86	94	4.37	32	3.75	**32**	**4.38**	7	2.14	0.000	rejected
6	Offline music/radio apps	215	3.46	32	3.25	88	2.76	**94**	**3.63**	32	2.94	32	3.25	7	0.57	0.000	rejected
7	Social networking sites (like Facebook etc.)	215	2.95	32	3.16	88	2.85	**94**	**3.33**	32	3.19	32	3.06	7	1.00	0.000	rejected

Table 5: ANOVA- Preferred CTMLVSV and Occupation

6.4.3 Annual income level and preferred CTMLVSV: It is found that stakeholders of the Assamese music industry should especially emphasise listeners with an annual income of *Rs.5,00,001-7,00,000* (as explained in sub-section 6.4.1) (refer to Table 6). This is in relation to their preference for listening/viewing songs and music videos via mobile phones/tablets, online music/radio apps, social networking apps (like WhatsApp), and sites (like Facebook). Stakeholders should also accord a similar focus on listeners with no income who prefer listening/viewing songs and music videos via iPods, PCs/Laptops, and streaming on offline music/radio apps.

Sr. No.	Listening and viewing songs and music videos	Annual Income (INR (Rs.))												p-value	Status of H_0
		No Annual Income		Less than 3,00,000		3,00,001-5,00,000		5,00,001-7,00,000		7,00,001-10,00,000		More than 10,00,000			
		N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean		
1	iPods	**222**	**2.65**	73	2.26	93	2.42	60	2.13	27	1.67	25	1.00	0.000	rejected
2	PCs/laptops	**222**	**3.97**	73	3.67	93	3.78	60	3.87	27	3.37	25	3.08	0.005	rejected
3	Mobile Phones/Tablets	222	4.72	73	4.52	93	4.67	**60**	**4.78**	27	4.56	25	4.28	0.017	rejected
4	Online music/radio apps	222	4.36	73	4.08	93	3.94	**60**	**4.42**	27	3.81	25	3.56	0.000	rejected
5	Offline music/radio apps	**222**	**3.47**	73	3.19	93	3.38	60	3.13	27	2.70	25	2.16	0.001	rejected
6	Social networking apps (like WhatsApp etc.)	222	3.12	73	2.99	93	3.17	**60**	**3.62**	27	2.41	25	3.00	0.010	rejected
7	Social networking sites (like Facebook)	222	3.03	73	2.95	93	3.24	**60**	**3.47**	27	2.04	25	2.20	0.000	rejected

Table 6: ANOVA- Preferred CTMLVSV and Annual Income Level

6.4.4. Life cycle stage and preferred CTMLVSV: In relation to listening/viewing songs and music videos on iPods, PCs/Laptops, Mobile Phones/Tablets, websites like YouTube, on both online and offline music/radio apps, and social networking sites (like Facebook) it is found that stakeholders of the Assamese music industry should particularly focus on listeners who are *young adults* with the highest mean (refer to Table 7). Also, similar emphasis should be given to listeners who are *young and married with children* with respect to listening/viewing songs and music videos on social networking apps (like WhatsApp). However, descriptive statistics revealed that the mean of respondent music listeners' current preference for listening/viewing songs and music videos via websites like YouTube and social networking apps (like WhatsApp) is highest in the case of *other listeners*. However, this group consisted of only eight (8) respondent listeners in each of these cases. Therefore, it is not prudent to consider this group (Aaker et al., 2016; Cooper et al., 2019; Malhotra and Dash, 2019).

Sr. No.	Listening and viewing songs and music videos	Life Cycle Stage														p-value	Status of H_0
		Teenagers		Young Adults		Young Married without child		Young Married with children		Young Married with children		Retired Older		Others			
		N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean		
1	iPods	28	1.93	**345**	**2.70**	25	2.24	51	2.06	35	0.60	8	0.00	8	1.00	0.000	rejected
2	PCs/Laptops	28	3.14	**345**	**4.08**	25	3.40	51	3.47	35	2.80	8	2.25	8	3.50	0.000	rejected
3	Mobile Phones/Tablets	28	4.61	**345**	**4.74**	25	4.52	51	4.45	35	4.43	8	4.13	8	4.63	0.006	rejected

4	Websites like YouTube etc.	28	4.54	**345**	**4.69**	25	4.56	51	4.63	35	4.37	8	3.88	8	4.75	0.020	rejected
5	Online Radio/Music Apps	28	4.18	**345**	**4.40**	25	3.80	51	3.92	35	3.20	8	2.50	8	3.38	0.000	rejected
6	Offline Radio/Music App	28	2.89	**345**	**3.61**	25	3.36	51	2.92	35	1.66	8	0.50	8	1.50	0.000	rejected
7	Social networking apps (like WhatsApp)	28	2.39	345	3.21	25	3.12	51	3.27	35	2.80	8	2.00	8	3.75	0.007	rejected
8	Social networking sites (like Facebook)	28	2.25	**345**	**3.20**	25	2.88	51	3.14	35	2.26	8	0.88	8	2.88	0.000	rejected

Table 7: ANOVA- Preferred CTMLVSV and Life Cycle Stage

6.4.5 Educational Qualification and Preferred CTMLVSV: As far as listening/viewing songs and music videos on PCs/Laptops, social networking apps (like WhatsApp), and social networking sites (like Facebook) are concerned, *post-graduate* music listeners should be stressed by the stakeholders of the Assamese music industry. This is explained in sub-section 1 (refer to Table 8). In the case of PCs/Laptops mean is highest for respondents who passed the 10th standard. However, this group consisted of only six (6) respondent listeners. Therefore, this group is not considered due to reasons explained in sub-section 6.4.4.

Sr. No.	Listening and viewing songs and music videos	Education										p-value	Status of H_0
		Below 10th Standard		Passed 10th Standard		Passed 12th Standard		Graduate		Post-Graduate			
		N	Mean	N	Mean	N	Mean	N	Mean	N	Mean		
1	PCs/Laptops	16	2.81	6	4.00	19	3.37	236	3.78	**223**	**3.92**	0.005	rejected
2	Social networking apps (like WhatsApp)	16	1.81	6	3.00	19	3.32	236	3.00	**223**	**3.35**	0.000	rejected
3	Social networking sites (like Facebook)	16	1.69	6	3.17	19	2.68	236	2.94	**223**	**3.22**	0.002	rejected

Note: There were no respondents for the illiterate category with exposure to CTMLVSV.

Table 8: ANOVA- Preferred CTMLVSV and Education

6.4.6 Gender and preferred CTMLVSV:

Results of the Independent sample t-test indicate that the null hypothesis that there is no significant difference between the means of listeners' preference for listening/viewing songs and music videos on watching songs/videos on websites like YouTube across their gender can be rejected (*p-value* less than α=0.05). This implied the existence of significant differences in the aforesaid case. Descriptive statistics indicate that the above mean is highest in the case of *female* music listeners. Therefore, as far as listening/viewing songs and music videos on websites like YouTube are concerned, *female* music listeners should be specifically stressed by the stakeholders of the Assamese music industry (refer to Table 9).

Sr. No.	Listening and viewing songs and music videos	Gender				p-value	Status of H_0
		Male		Female			
		N	Mean	N	Mean		
1	Websites like YouTube etc.	253	4.62	247	4.70	0.000	rejected

Table 9: t-test- Gender and Preferred CTMLVSV

6.4.7 Marital status and preferred CTMLVSV: As far as listening/viewing songs and music videos on PCs/Laptops, mobile phones/tablets, websites like YouTube, etc., via streaming on both online and offline Radio/Music Apps and social networking sites (like Facebook etc.) are concerned, music listeners that are still *single* (unmarried) should be specially stressed by the stakeholders of the Assamese music industry (similarly as in sub-section 6) (refer to Table 10).

Sr. No.	Listening and viewing songs and music videos	Marital Status				p-value	Status of H_0
		Married		Single			
		N	Mean	N	Mean		
1	PCs/Laptops	137	3.31	**363**	**3.99**	0.000	rejected
2	Mobile Phones/Tablets	137	4.49	**363**	**4.72**	0.000	rejected
3	Websites like YouTube etc.	137	4.56	**363**	**4.66**	0.047	rejected
4	Online Radio/Music App	137	3.77	**363**	**4.33**	0.000	rejected
5	Offline Radio/Music App	137	2.66	**363**	**3.49**	0.000	rejected
6	Social networking sites (like Facebook etc.)	137	2.80	**363**	**3.10**	0.000	rejected

Table 10: t-test - Preferred CTMLVSV and Marital Status

7. CONCLUSION

The evolution of media and technology has led to significant changes in the way music has been created, marketed, and consumed. Undoubtedly, the opportunities and challenges for the global music industry as well as for the Assamese music industry have increased. This survey revealed that music listeners are welcoming changes and accepting newer technologies. Listeners are given abundant choices and the convenience of listening to music at their will. Most of the contemporary media and technologies listed in the survey are internet-based. This research work will give stakeholders a brief idea about which way the above industry is moving and what challenges they will have to face in marketing music considering the dynamics of media and technology in the future.

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